



Bonide Citrus, Fruit & Nut Orchard Spray Ready to Spray

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Bonide Citrus, Fruit & Nut Orchard Spray Ready to Spray
Product code : 67702174

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Insecticide, Fungicide

1.3. Details of the supplier of the safety data sheet

Bonide Products, Inc.
6301 Sutliff Road
Oriskany, NY 13424
T (315) 736-8231
www.bonide.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - 1 (800) 424-9300 and/or 1 (703) 527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq. 2 H225

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapor
Precautionary statements (GHS-US) : P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P403+P235 - Store in a well-ventilated place. Keep cool

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

Mixture

Name	Product identifier	%	Classification (GHS-US)
Sulfur, solid	(CAS No) 7704-34-9	10	Not classified
Pyrethrins	(CAS No) 8003-34-7	0.25	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Inhalation:vapour), H331

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapor.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Handle empty containers with care because residual vapors are flammable.
Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Use only non-sparking tools.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions	: Keep in fireproof place. Keep container tightly closed.
Incompatible products	: Strong bases. strong acids.
Incompatible materials	: Sources of ignition. Heat sources.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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DNEL	DNEL	>=
Pyrethrins (8003-34-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
Sulfur, solid (7704-34-9)		
USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³

8.2. Exposure controls

Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: Wear approved mask.
Other information	: When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Yellow, opaque suspension.
Color	: Light yellow.
Odor	: Sulfur and slight alcohol smell.
Odor threshold	: No data available
pH	: 4.1 - 4.4
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 325 °F
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.04
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions. Highly flammable liquid and vapor.

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10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Pyrethrins (8003-34-7)	
LD50 oral rat	200 mg/kg (Rat)
LC50 inhalation rat (mg/l)	3.4 mg/l/4h (Rat)

Sulfur, solid (7704-34-9)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h (Rat)

Skin corrosion/irritation : Not classified
pH: 4.1 - 4.4

Serious eye damage/irritation : Not classified
pH: 4.1 - 4.4

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Pyrethrins (8003-34-7)	
LC50 fish 1	0.049 mg/l (96 h; <i>Lepomis macrochirus</i>)
LC50 other aquatic organisms 1	0.011 mg/l (96 h; <i>Gammarus</i> sp.)
LC50 fish 2	0.009 mg/l (96 h; <i>Ictalurus punctatus</i>)
Threshold limit other aquatic organisms 1	0.011 mg/l (96 h; <i>Gammarus</i> sp.)

Sulfur, solid (7704-34-9)	
LC50 fish 1	866 mg/l (96 h; <i>Brachydanio rerio</i>)
LC50 fish 2	> 100 mg/l 96 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>)
TLM fish 1	10000 ppm (96 h; <i>Gambusia affinis</i>)
Threshold limit other aquatic organisms 1	> 10000 mg/l (24 h; <i>Daphnia magna</i>)

12.2. Persistence and degradability

Bonide Citrus, Fruit & Nut Orchard Spray Ready to Spray	
Persistence and degradability	Not established.

Pyrethrins (8003-34-7)	
Persistence and degradability	Readily biodegradable in water.

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Sulfur, solid (7704-34-9)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Bonide Citrus, Fruit & Nut Orchard Spray Ready to Spray	
Bioaccumulative potential	Not established.

Pyrethrins (8003-34-7)	
Log Pow	6.15 (Estimated value)

Sulfur, solid (7704-34-9)	
Log Pow	0.23 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Pyrethrins (8003-34-7)	
Ecology - soil	Not toxic to plants. Toxic to bees.

Sulfur, solid (7704-34-9)	
Ecology - soil	Not toxic to bees.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

SECTION 15: Regulatory information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION:

Causes moderate eye irritation.

15.1. US Federal regulations

No additional information available

15.2. International regulations

No additional information available

15.3. US State regulations

pyrethrins (8003-34-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

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sulfur, solid (7704-34-9)

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Flam. Liq. 2	Flammable liquids Category 2
H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H331	Toxic if inhaled

SDS US (GHS HazCom 2012) - Pesticides

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.